

ABSTRACT

The present invention provides a system and method for satellite and terrestrial base station communications utilizing an infrared signal. The optimal location for the present invention is determined based on the frequency, and derived attenuation, of the infrared signal. Attenuation is also based on the cloud water content persistent at any determined optimal location, where cloud water content may be determined by varying an exceedance probability. The satellite of the present invention may be part of a combined system of satellites in Molniya elliptical orbits and geosynchronous orbits.

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